AMK Rack LCD Console User Reference Manual

Introduction

Thank you for purchasing **AMK** LCD console drawer. **AMK** LCD console drawer can save your MONEY, TIME, SPACE, EQUIPMENT and POWER.

PCs or Servers can be controlled from One Keyboard, Mouse and LCD Monitor. **AMK** LCD console drawer is loaded with features such as 19" Rack Mount Size, Daisy Chain up to eight units, On Screen Display Menu, Password security, Searching PC server name, Hot key Control, Front Panel Push Button and Auto Scan Control. It has complete keyboard and mouse emulation for simultaneous PCs boot-up process.

Features

- Meets EIA310c & IEC-3 specifications
- 1U, built-in 17" or 19" LCD Monitor, 1/8/16 port PS2 or Combo (PS2 & USB) KVM switch in 19" rack mount cabinet.
- Single Rail or Dual Rails
- Built-in rail self-locking device
- Support DOS, Win3.X, Win95/98/98SE/2000/ME/XP, WinNT, Netware, SCO Unix, HP Unix, Linux
- Hot Plug - Add PCs or Remove Connected PCs for Maintenance no need to power down the KVM switch or PCs.
- No Software Required - easy PC selection via On Screen Display Manual, Push Buttons and Hot Keys
- PS2 KVM support eight characters password protection, Combo KVM support two layers password security protection.
- Auto Scan Mode for monitoring PCs and flexible Scan time from 5~99 seconds
- Keyboard status restored when switching PCs
- LED Display for easy status monitoring
- Buzzer sound for switching port confirmation.
- Using Standard VGA, Keyboard and Mouse cable.
- Built-in one extra daisy chain port and no waste any PC port

Package Contents

Model No.: AMK501/ AMK701/ AMK801

Package Content	QTY
AMK 1 port	1
User's manual	1
Power Cord	1
Bracket	2
KVM Cable	1
Foam with Box	1
Screw Pack	1

Model No.: AMK508/ AMK708/ AMK808

Package Content	QTY
AMK 8 port KVM Switch	1
User's manual	1
Power Cord	1
Bracket	2
KVM Cable	8
Foam with Box	1
Screw Pack	1

Model No.: AMK516/ AMK716/ AMK816

Package Content	QTY
AMK 16 port KVM Switch	1
User's manual	1
Power Cord	1
Bracket	2
KVM Cable	16
Foam with Box	1
Screw Pack	1

Note: AMK models with DC power supply do not include power cord.

Technical Specifications (Single Rail)

1U, **Single rail**, Rack LCD Console Drawer Specification for AMK 801/808/816

Model No.	AMK801	AMK808	AMK816
PC Port	1	8	16
Drawer Design	1U, Single Slide Rail self-locking device for 19” rackmount		
LCD Display	17” or 19”, 1280x 1024 resolution with tempered glass		
Keyboard/ Mouse	104-key Industrial keyboard with touchpad Operating life of keys: 8 million cycles		
Construction	Heavy-duty Steel		
Power supply	Built-in 60W, 90~264VAC Auto Switch, Operating Temp.: -20~70°C		
Physical Security	Key locking Mechanism		
Protection	Tempered glass protect LCD screen		
Power Consumption	3 watts stand-by, 25 watts in-use		
Operation Temperature	0~50℃(32 ~ 122°F)		
Storage Temperature	-20 ~ 60℃(-4 ~ 140°F)		
Humidity	0~90%, Non-Condensing		
Weight (kg)	12 kg	13 kg	13 kg
Dimension (cm)	442 X 44 X 480mm	442 X 44 X 590mm	442 X 44 X 590mm
Compliance	CE, FCC Class A, RoHS		

1U, **Single rail**, Rack LCD Console Drawer Specification for AMK 501/508/516

Model No.	AMK501	AMK508	AMK516
PC Port	1	8	16
Drawer Design	1U, Single Slide Rail self-locking device for 19” rackmount		
LCD Display	17.3”, 1600x 900 resolution with tempered glass Option: 17.3”, 1920x 1080 resolution		
Keyboard/ Mouse	104-key Industrial keyboard with touchpad		
Construction	Heavy-duty Steel		
Power supply	Built-in 60W, 90~264VAC Auto Switch, Operating Temp.: -20~70°C		
Physical Security	2 thumb screws to secure LCD monitor		
Protection	Tempered glass protect LCD screen		
Power Consumption	3 watts stand-by, 25 watts in-use		
Operation Temperature	0~50℃(32 ~ 122°F)		
Storage Temperature	-20 ~ 60℃(-4 ~ 140°F)		
Humidity	0~90%, Non-Condensing		
Weight (kg)	10 kg	11 kg	11 kg
Dimension (cm)	442.4 X 44 X 410mm	442.4 X 44 X 520mm	442.4 X 44 X 520mm
Compliance	CE, FCC Class A, RoHS		

AMK5 series: 2 thumb screws to secure LCD monitor

Technical Specifications (Dual-Rail)

1U, **Dual-Rail**, Rack LCD Console Drawer Specification for AMK 701/708/716

Model No.	AMK701	AMK708	AMK716
PC Port	1	8	16
Drawer Design	1U, Dual Slide Rail self-locking device for 19” rackmount		
LCD Display	17” or 19”, 1280x 1024 resolution with tempered glass		
Keyboard/ Mouse	104-key Industrial keyboard with touchpad Operating life of keys: 8 million cycles		
Construction	Heavy-duty Steel		
Power supply	Built-in 60W, 90~264VAC Auto Switch, Operating Temp.: -20~70°C		
Physical Security	Key locking Mechanism		
Protection	Tempered glass protect LCD screen		
Power Consumption	3 watts stand-by, 25 watts in-use		
Operation Temperature	0~50℃(32 ~ 122°F)		
Storage Temperature	-20 ~ 60℃(-4 ~ 140°F)		
Humidity	0~90%, Non-Condensing		
Weight (kg)	12 kg	13 kg	13 kg
Dimension (cm)	442 X 44 X 480mm	442 X 44 X 590mm	442 X 44 X 590mm
Compliance	CE, FCC Class A, RoHS		

KVM switch		8-port		16-port	
		PS2 KVM	COMBO KVM	PS2 KVM	COMBO KVM
Port Connection	KVM Port	8-Port		16-port	
	Max. Port	Daisy Chain up to 8 levels to support 120 servers		Daisy Chain up to 8 levels to support 128 servers	
Port Selection		8x Front Push Buttons, OSD Manu, Hotkey		16x Front Push Buttons, OSD Manu, Hotkey	
Connectors	KVM Port	8x DB-15	8x DB-15	16x DB-15	16x DB-15
	Console Port	-	1x DB-15, 2x USB	-	1x DB-15, 2x USB
	Daisy Chain	1x DB-15, PS2 KB/MS	1x DB-15	1x DB-15, PS2 KB/MS	1x DB-15
	Power	1x 3-prong AC Socket			
Switch	Port Selection	8x Front Push Buttons		16x Front Push Buttons	
	Reset	1x push button			
	Power	1x Rocker Switch			
	LCD on/off	1x Front standby Push button			
	LCD control	4x LCD Adjust push button			
LED	Operation	8		16	
	Power	8		16	
	Keyboard Lock	1x Num Lock, 1x Caps Lock, 1x Scroll Lock			
KVM Cable		8x 1.8m PS2 KVM cable	8x 1.8m USB cable	16x 1.8m PS2 KVM cable	16x 1.8m USB cable

Option:

80W, 24~48 VDC power supply
Touch screen: AMK501/ AMK701/ AMK801 only
DVI interface: AMK501/ AMK801 only

Cable Diagrams

USB KVM cable: VGA D-sub 15 pin to VGA D-sub 15 pin and USB connector
1.8m USB cable, P/N: 68103-03001-01
3.0m USB cable, P/N: 68103-03002-01

PS2 KVM cable: VGA D-sub 15 pin to VGA D-sub 15 pin and PS2 KB/MS connector
1.8m PS2 cable, P/N: 68103-01001-00
3.0m PS2 cable, P/N: 68103-01002-00
5.0m PS2 cable, P/N: 68103-01003-00

Rear Panel of AMK801-PB/ AMK801-UB/ AMK701-PB/ AMK701-UB:

Rear Panel of AMK808-PB/ AMK708-PB (PS2 KVM):

Rear Panel of AMK808-CB/ AMK708-CB (PS2& USB KVM):

Rear Panel of AMK816-PB/ AMK716-PB (PS2 KVM):

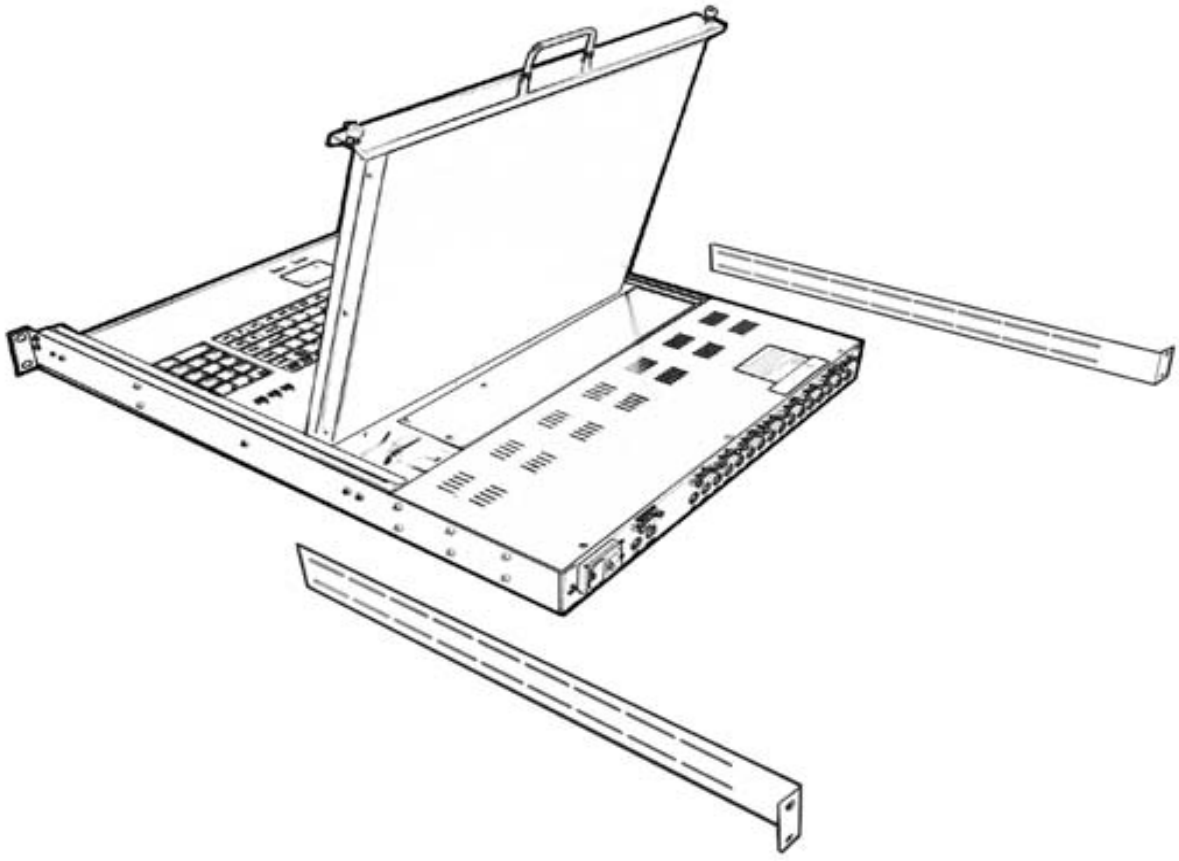
Rear Panel of AMK816-CB/ AMK716-CB (PS2& USB KVM):

Rackmount Installation

1. Find the property position to screw these two extension brackets with the ears and both side onto the server rackmount first.

2. Lift & push the AMK inside the rackmount, and screw between bracket and AMK with 4 screws.

3. Mount the front ears of AMK main body onto the server rackmount.



Installation/Operation

Before installation, please make sure all of peripherals and computers have been turned off. This example of installation is based on AMK808 and you also can think that all AMK series have the same installation procedures

Step 1

Insert the RACK LCD Console Drawer into the 19” rack cabinet in the desired position.
Attach the 2x rear support brackets and extending into the proper length of the cabinet depth. And secure the 2x brackets on each side with the supplied screw.
Secure the rear and front rack mounting to properly mount and fix its position into the cabinet

Step 2

Connecting the KVM cable, VGA D-sub 15 pin was connected to the rear of drawer, and VGA D-sub 15 pin and PS2 KB/MS or USB was connected to PC or server. For the AMK808-CB/ AMK816-CB both PS/2 and USB type can be used with the KVM, just choose the desire type to match with your system, the KVM accepts both.

Step 3

Double-check all of the connections. You can check the color of keyboard and mouse connector to make sure the keyboard and mouse cables go to the correct ports.

Step 4

Repeat step 5 to 7 for the remainder of the computers.

Step 5

Connect the AC power cable into rear of the drawer unit.
Turn on the drawer unit main power on the back of the chassis

Step 6

Turn on all the computers and then boot them one by one. Switch on your monitor make sure every monitors can be display and then set the computer’s Monitor power always on. In order to keep the connection form KVM to the Computers.

PS2 KVM Connection

The power on state of 8/16 port PS2 KVM switch:
When you power on KVM switch, it will ask you the password, **the default password value is eight zero –" 00000000 "**. Please key in eight zero and enter the same value at retype field.
Note: Before you are not familiar with the operation of OSD menu, please don't change the password – i.e. keep default eight zero (00000000) value. Otherwise, if you have set the password and unfortunately forget the password, you need send it back to your distributor for maintaining the password.

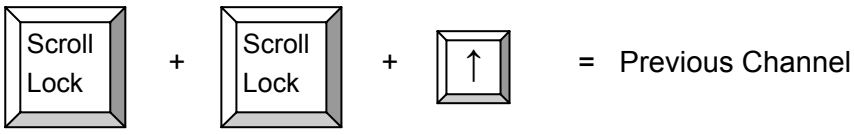
LED Indication:
You can press the button in order like mentioned-above diagram.
When you select one of sixteen PC ports and this PC is powered on, the selected port LED is lit. When you select one of sixteen PC ports and this PC is shut down or disconnected a PC, the selected port LED will flash.

Reset Button ((Bank Select) and (Port Select) **):**
To press both "select" button and "bank" button of master bank simultaneously can reset KVM switch. This reset action will not only return KVM switch back to initial state --- Check the password, but also re-check all of slave banks which connected to mast KVM Switch.
If you add a new KVM Switch as a slave bank, please use reset button of master KVM Switch to automatically assign a new ID to it. You can view this new slave bank go through OSD menu. The PC ports of KVM Switch do not be reset by reset command.

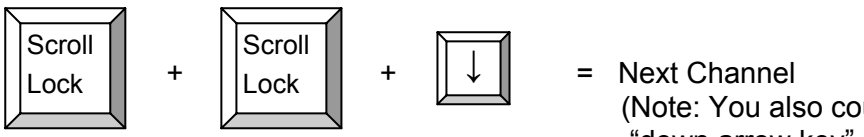
Keyboard Hot Key Commands:
You can also conveniently command **AMK** KVM switch by switching ports through simple key sequences. To send commands to **AMK** KVM switch, **the "SCROLL LOCK" key must be pressed twice within 2 seconds.** You will hear a beep for confirmation and the keyboard is in hot key mode. If you have not pressed any key in hot key mode within 2 seconds (It means to key in any key follows up "Scroll Lock" "Scroll Lock" key), the keyboard will back to under Operation System control state.

Below are the different hot key commands:

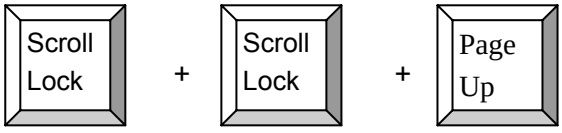
Within 2 seconds



= Previous Channel



= Next Channel
(Note: You also could press "up arrow key" or "down arrow key" longer time to speed up selecting the destination port)



= Previous Bank

Scroll Lock + Scroll Lock + Page Down = Next Bank

To select PC port:

Scroll Lock + Scroll Lock + Bank No Port No

Port No.
1~4 (4 port)
1~8 (8 port)
1~16 (16 port)

Scroll Lock + Scroll Lock + B = Beeper
(Note: The default Beeper function is ON and beeper control is only for available for Scan Mode)

Scroll Lock + Scroll Lock + S = Auto Scan

To get out of Auto Scan Mode, Press any key or SPACE bar.

ROM REFLASH

Scroll Lock + Scroll Lock + R = OSD default value
(Note: Not including password)

Scroll Lock + Scroll Lock + F = Search the same PC name
(Note: Search PC name starting from 1st PC port)

Scroll Lock + Scroll Lock + Space bar = On Screen Display Menu

Example：

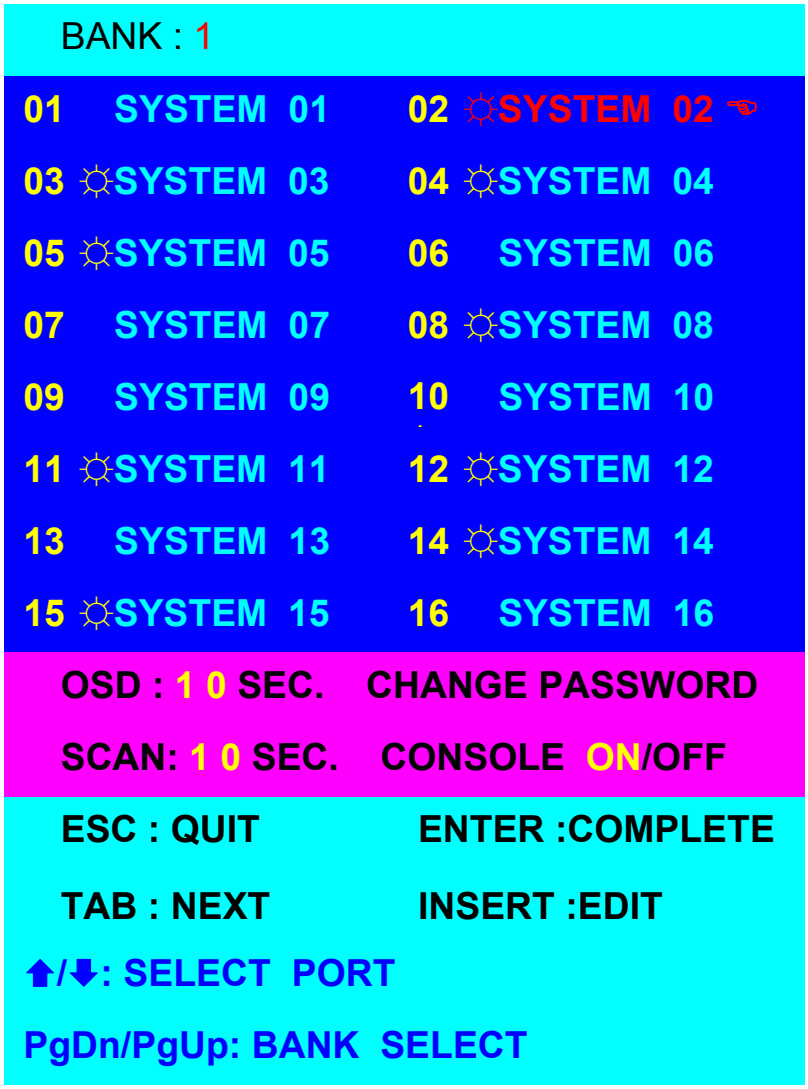
A. To access a computer attached to Port 6 of the fifth Bank. You can press through hot key as:
   Scroll lock + Scroll lock + “5” + “0” “6”

B. To access a computer attached from Bank 3 to Bank 4, You can press through hot key as:
   Scroll lock + Scroll lock + Page Down

Note:
Bank no. and Port no. selection must be made using the numeric keys on the keyboard. Numeric keys on the keypad are not available as a hot key command.

PS2 KVM OSD Operations

When you pop up the OSD menu window go through the hot key, you will see the following small window on your monitor.



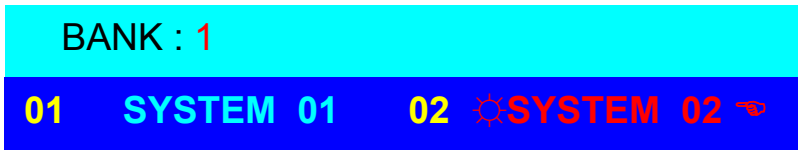
a. The 1ST line bar is Bank no.

b. The 2nd block is your PC system name list. You will find the system number list from 01 to 04 (if the current box is 4 port) or from 01 to 8 (if the current box no. is 8 port) or from 01 to 16 (if the current box no. is 16 port). You can define your PC name in maximum 8 characters. The factory default of 16 port KVM switch PC name is from "SYSTEM 01", "SYSTEM 02" ,…, "SYSTEM 16" and 8 port KVM switch is from "SYSTEM 01", "SYSTEM 02",…, "SYSTEM 08". Besides, the sun symbol "☼ "near to the PC name represents the PC system is powered on.

c. To use up arrow key " ↑ " or down arrow key " ↓ " to select port for destination PC name.

After you have selected the PC port already, you can press the ENTER Key to switch the PC port you want immediately

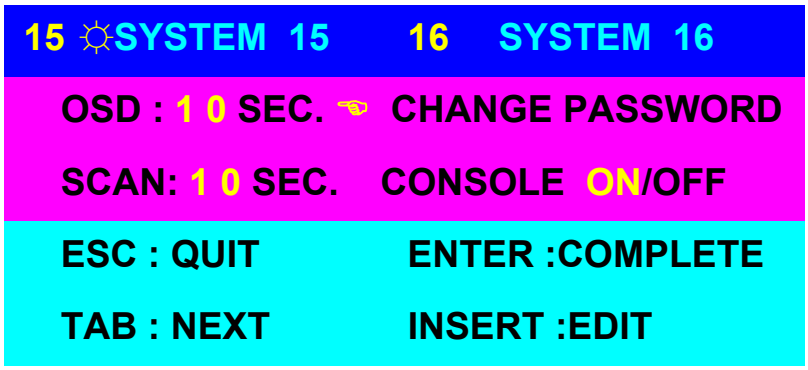
To use " PgUp " key or " PgDn" key for selecting previous or next Bank no. (or Box No.)



To press "INS" key for editing PC name.

After finishing the edit, please press "Enter "key for saving information.

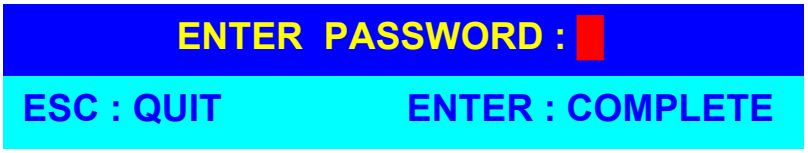
To use " Tab " key to select items like Bank, OSD, SCAN, CHANGE PASSWORD, CONSOLE ON/OFF, etc…



a. The “OSD: 10 SEC” means that the OSD windows display or PC system name exists 10 sec. on your monitor. You can modify it from 05 sec to 99 sec. The factory default value is 10 sec..

b. The “SCAN TIME” means that scan interval from one PC port to next PC port. The default SCAN time is 10 sec and the maximum scan time is 99 sec.

c. The “CHANGE PASSWORD” is for user to avoid all PC systems to be intruded by the other person. The default password is 8 digits “00000000 “.



There is an enter password window showed out when you select this item and then press the Enter. The maximum password is eight digits. After you key in the password already and press the Enter key, there is another window for confirming your typed password.

You need to retype the password again for rechecking your previous password is matched or not.

d. The “CONSOLE ON/OFF “means to manage the console of KVM switch. If you select “CONSOLE ON “, it means that any user can use the console. If you select “CONSOLE OFF “(factory default OFF state), it means that any user will not be allowed to use the console unless you enter the password. When you enter the password already and pass the KVM switch authentication, the CONSOLE will be set to ON. After you finish using KVM switch, please don’t forget to set up CONSOLE ON state to OFF state. Besides, if current CONSOLE is ON state and you reset KVM switch, the CONSOLE will be set up ON state back to OFF state.

e. When you finish the set up of PC name and get out of OSD setting mode, you will find the PC name showed at the up-left corner of monitor. Now, you can use “ESC” key to clear the message right away if you don’t need it.

f. If you want OSD returning back to factory default value, you can execute “SCROLL LOCK”, “SCROLL LOCK”, “R” keys in order. The Seven segment LEDs on the front panel will be flashed during the refresh process.

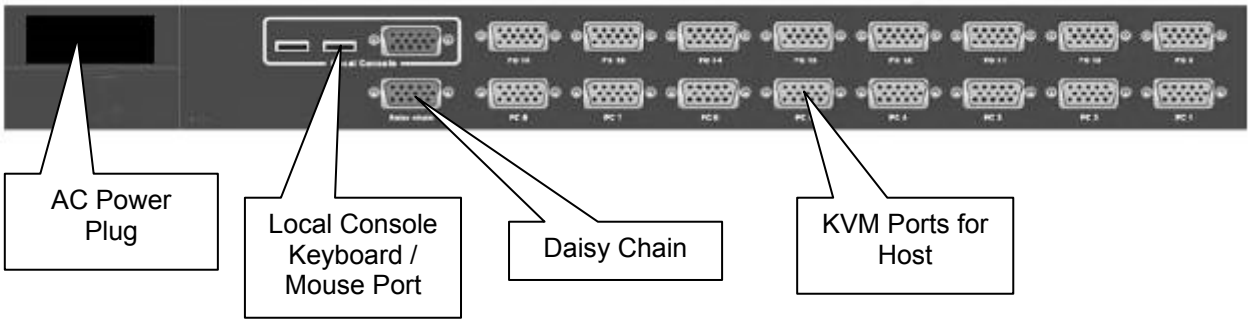
When the OSD value back to default setting, the seven segment LEDs on the front panel will stop flashing

COMBO KVM Connection

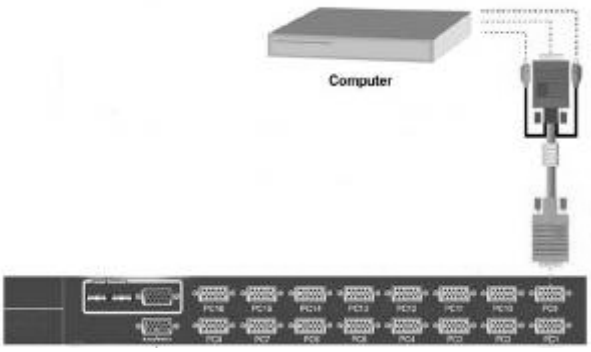
The rear section of the unit will have a series of connections for connecting to systems

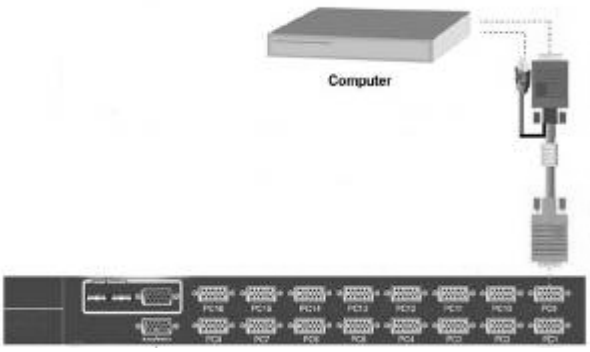
8 Ports

16 Ports

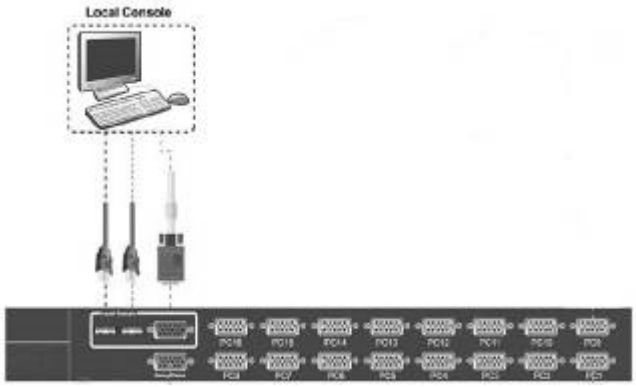


Connecting KVM Ports for Host using PS2/ USB connection. Connect single ended D-Sub end to KVM port and other end composing of VGA D-Sub, PS2/ USB Keyboard and Mouse to corresponding ports on the system.

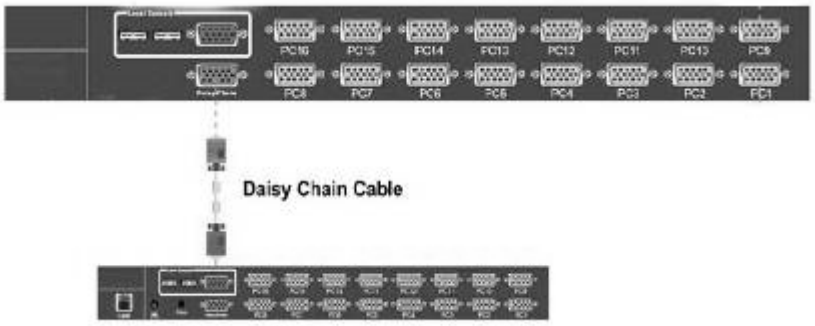




You can connect a local console port to operate the KVM bypassing the built-in LCD and keyboard/touchpad through the rear local console port. Connect the VGA D-Sub connector and USB keyboard and USB mouse to the port marked.



You can connect additional KVM port by adding additional KVM switches and connecting between them a daisy chain cable. The control will be from the primary KVM by changing banks selection.

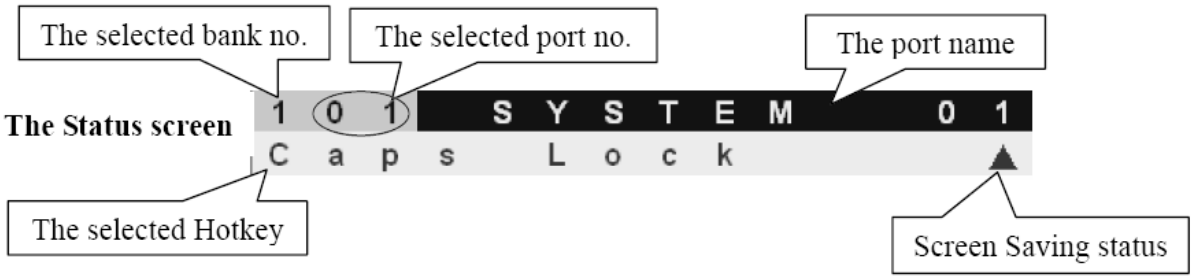


COMBO KVM OSD Operations

When powering up the unit it is require that you provide authentication to access the KVM control for all system connected to the unit. The default user name is **00000000** and the default password is **00000000**

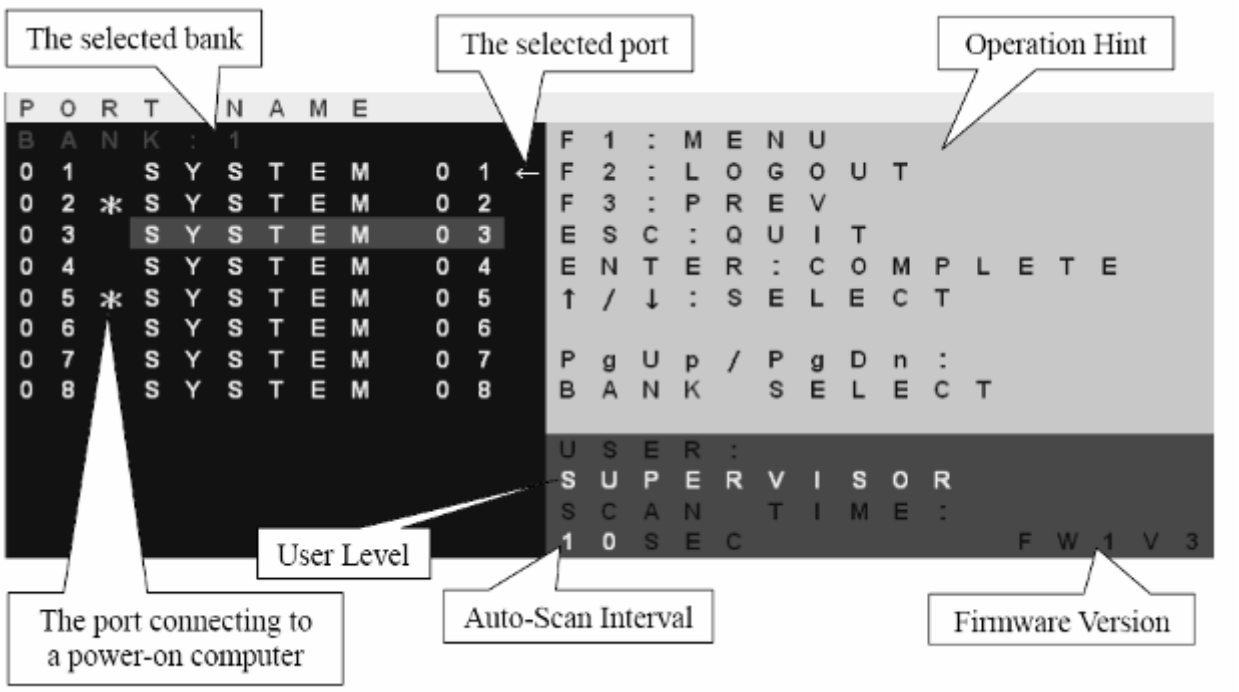
The Login window

After login the screen will display status of the current setting. This will give you information regarding the port (name) and key setting. Pressing any key will remove the status display.



You can bring up the KVM OSD by pressing the **Cap Lock** key <u>twice</u> and then **Space Bar**.

The first page display will show the OSD menu that allows you to choose the main general options you would like to proceed.



Following are list of function key to access each of the action.

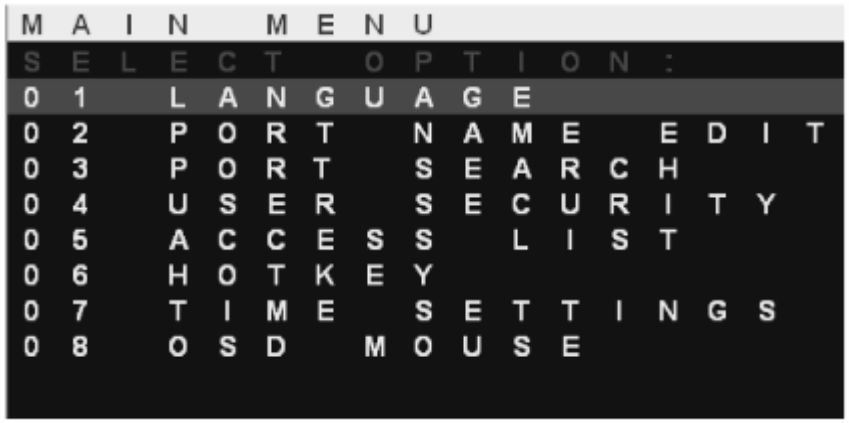
OSD Function Key	Description
F1	Go to the Main Menu
F2	To log out the OSD. If Security is enabled it will show up the Login window waiting for username and password. If Security is disabled it will show up the Status window
F3	Previous Menu
Enter	Switch to the selected port
↑ or ↓	Moving Up or Down
PgUp	Previous Bank
PgDn	Next Bank
Esc	Exit
1	Show ports 01 ~ 08
2	Show ports 09 ~ 16
3	Show ports 17 ~ 24
4	Show ports 25 ~ 32

The bottom right portion of the OSD gives the status of the user login and setting.

USER --- There are two types of user levels: **SUPERVISOR** and **USER**. The default is **SUPERVISOR. SUPERVISOR** can setup and change the OSD settings at Main Menu. **USER** can only do the port switch and port search.

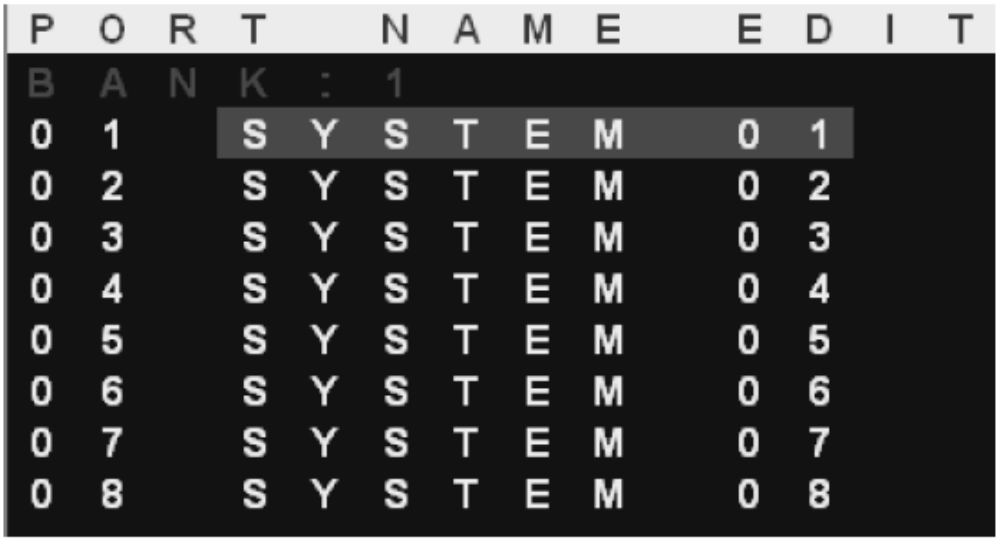
SCAN TIME --- This is the time interval for auto-scan function. When auto-scan function is activated, the KVM switch will auto-scan the host port one by one in the interval as setting. Notice that the port without connecting to a computer/server will be skipped over on the scan. The numeric keypad is not supported, while in OSD screen, the arrow keys, PgUp, PgDn, and Enter keys are supported.

By going into the menu, you will receive a new list of functions.



The language selection allows you to choose the desired display language for reference. **Non-Latin based language are for display purpose only and not for editing

The port name edit allow you to assign naming to each of the port connected to better recognize and categorize based on your needs.



The port search allows you to find by the name which you have assign to a port. This is especially useful when you have multiple banks of ports. By searching a wildcard *, it will return all port names.

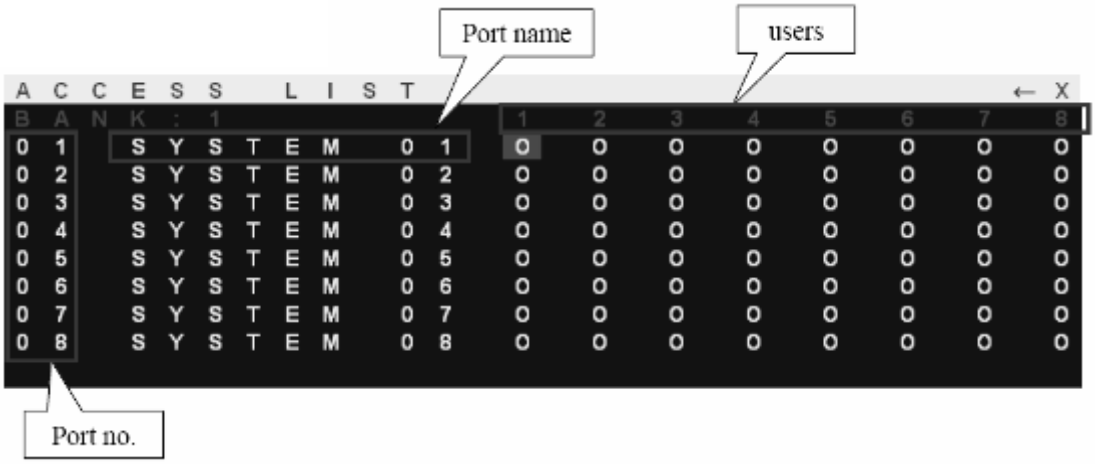
The user security menu allows you to assign 1 supervisor and up to 8 users. User name and password are assigned here.

Press the **Enter** key or left button of mouse for editing. The left-top "S" means SUPERVISOR, and "1", "2", "3",…., "8" mean USERs. The maximum length of NAME and PASSWORD is eight characters (A~Z and 0~9).

Press **Enter** key to start the editing. After the editing, press **Esc** key to cancel the editing without any change or press **Enter** key to save the setting.

HINT1: Blank has underscore, while SPACE doesn't have.
HINT2: Hit any alphanumeric key so can move to next input item. SPACE is treated as a valid character
HINT3: At default, all USER's username = SPACE and password = SPACE, but they are invisible, so anyone can use SPACE SPACE to log in.

The access list allows you to assign user right to each port. Only the supervisor can configure the access list. Use the Enter key to toggle the port right, where O means enable and X means disable.



The hot-key menu allows you to set the hot key used to bring up the OSD.

The time settings menu allows you to set the auto-scan time for host port by port.

The OSD mouse menu allows you to set the OSD cursor mouse speed.

COMBO KVM Hot Key Operation (AMK808/ 816/ 708/ 716-CB)

Hot key can be provides convenient short cut to access functions similar to the OSD menu. You can have a full command of the KVM switch through a simple sequence of key. To access, you must press the **hotkey** (default **Caps Lock**) **twice within 2 seconds**. You will hear a beep sound confirming activation, then pressing another command key to submit. If you do not press any command key 2 second afterward it will escape back to normal mode.

Command	Function
Space bar	Bring up the OSD overlay screen
↑ or ↓	Moving Up or Down
[1,2,..,8] bank, [01, 02,..,32] port	■ The first digit is bank number starting with "1". The first KVM switch unit on the Daisy chain line is of bank 1 (the Master). A standalone KVM switch is fixed in bank 1. ■ The second & third digits are port number starting with "01".
PgUp	Previous bank
PgDn	Next bank
B	To enable/disable **beep sound** function
L	To enable/disable the **Screen Saving** function and 10min auto-logout function. This function is **default OFF (Disable).**
P	To **log out the OSD**. If Security is enabled it will show up the Login window waiting for username and password. If Security is disabled it will show up the Status window
R	For SUPERVISOR to set the OSD back **to factory default value** (except User Security settings).
S	For SUPERVISOR to activate the **Auto-Scan** function
U	For SUPERVISOR to enable/disable **Security** function. If the Security is off, we don't need user name & password to access to the KVM system. This function is **default OFF (Disable).**

Troubleshooting

1. Ensure that all cables are well seated. Label all of cables with the number for each respective computer to avoid confusion.

2. The recommended VGA cable distance is 5 meters maximum without ghosting and degradation. Normally, the cable length is based on driver capacity of your VGA card. If you need longer VGA cable, please use VGA extender to accomplish your applications.

3. The recommended PS2 cable distance is 5 meters maximum. Normally, the cable length is based on driver capacity of your motherboard PS2 port. If you need longer PS2 cable, please use PS2 extender to accomplish your applications.

4. The Power Jack polarity is center positive and the power adapter need be DC12V, 1A .

5. Don't press any keys on the keyboard while the selected computer is booting up. Otherwise, it might cause the keyboard error or keyboard is not detected at PC side.

6. The computer boot up fine, but keyboard doesn't work
   Make sure the keyboard works when directly plugged into the computer.
   Try a different keyboard, but use only 101, 102 or 104-key keyboard.

7. The Mouse is not detected during PC boot up.
   Make sure the mouse works when directly plugged into the computer.
   Make sure the mouse is a true PS/2 mouse. A combo mouse will work just as long as it is set for PS/2 mode with the correct adapter. Try a different mouse.
   Avoiding moving the mouse or pressing the mouse buttons when switching ports.
   Avoiding switching ports during shutting down the PC process.
   When you switch one PC port to another PC port, the best scan time setting need to be set to 5 sec. or more. Normally, the VGA monitor change one resolution mode to another will take one or two seconds. So, the scan time is not recommended to below 5 seconds.

8. The power switch is off, but the switch still works fine or power adapter is unplugged from the switch, but the switch still works fine.
   KVM Switch unit draws the power source from power adapter and all PC's PS2 port. Some PC's PS2 port can support enough power for the switch, but some PC's PS2 port (like laptop, notebook computer…etc.) is unable to supply enough power for the switch. In order to make sure the system can work steadily, please do not set power switch to off state or remove the power adapter from the switch.

   Although the PCs connected to KVM Switch unit are able to support enough power to the stand alone switch, KVM Switch unit still needs a power adapter for daisy chain more banks.

9. If forgetting the "password" you typed, please contact your supplier.